

The opinion in support of the decision being entered today is
not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ASTRID KLEEN,
ANDREA SAETTLER, HORST HOEFFKES
AND RALK OTTI

Appeal 2006-2174
Application 10/088,247
Technology Center 1700

Decided: August 27, 2007

Before CHARLES F. WARREN, THOMAS A. WALTZ, and
CATHERINE Q. TIMM, *Administrative Patent Judges*.

WALTZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Primary Examiner's final rejection of claims 18-28 and 30-33. The only other claims pending in this application are claims 29 and 34-36, and claims 34-36 stand allowed by the Examiner, while claim 29 has been objected to

as allowable but depending on a rejected claim (Br. 2).¹ We have jurisdiction pursuant to 35 U.S.C. § 6(b).

According to Appellants, the invention is directed to a process for coloring keratin fibers which comprises applying dyes and/or dye precursors, at least one enzyme of the transglutaminase type, and at least one active substance with substrate activity for the enzyme, to the fibers (Br. 3). Independent claim 18 is illustrative of the invention and a copy of this claim is reproduced below:

18. A process for coloring keratin fibers comprising applying to keratin fibers

(a) at least one colorant comprising at least one dye or dye precursor, or combinations thereof;

(b) at least one enzyme having transglutaminase activity; and

(c) at least one active substance having substrate activity for the enzyme having transglutaminase activity.

The Examiner has relied on the following prior art references as evidence of obviousness:

McDevitt	US 6,051,033	Apr. 18, 2000
Bernard	US 6,274,364 B1	Aug. 14, 2001

ISSUES ON APPEAL

Claims 18, 20-25, and 33 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bernard (Answer 3).

¹ We refer to and cite from the “Amended Appeal Brief” dated Oct. 25, 2005.

Claims 19, 26-28, and 30-32 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Bernard in view of McDevitt (*id.*).

Appellants contend that there is no disclosure in Bernard of formulations or methods for the treatment of hair (Br. 3). Appellants further contend that although Bernard does identify shampoos, dyeing formulations, and similar uses, the composition of Bernard is primarily used for desquamation and the reference merely shows that these skin formulations may be used in other types of compositions (Br. 4; Reply Br. 3).

Appellants contend that the disclosure of McDevitt relates to methods of treating wool fibers, not human hair as treated by Appellants (Br. 4-5). Appellants also contend that the references applied are non-analogous art since Bernard relates to desquamation while McDevitt treats wool and animal fibers (Reply Br. 6-7).

The Examiner contends that Bernard teaches a composition formulated as dyeing or setting lotions for the hair which comprises a colorant, a transglutaminase enzyme, and at least one substance having substrate activity for the enzyme (Answer 3).

The Examiner contends that Bernard teaches compositions used for treating the hair, while McDevitt teaches treatment of keratin fibers such as wool and other animal fibers (Answer 7).

Accordingly, the issues presented from the record in this appeal are as follows: (1) Does the Examiner establish that Bernard discloses a method of treating keratin fibers with the three components as recited in the claims?; and (2) Does the Examiner identify a proper reason for combining the

teaching of McDevitt with the disclosure of Bernard to meet every limitation of the claimed subject matter?

We determine that the Examiner has established a prima facie case of obviousness in view of the reference evidence, which prima facie case has not been adequately rebutted by Appellants' arguments. Therefore we AFFIRM both grounds of rejection presented in this appeal essentially for the reasons stated in the Answer, as well as those reasons set forth below.

OPINION

We determine the following factual findings from the record in this appeal:

- (1) Bernard discloses cosmetic treatments and compositions for promoting desquamation, where the compositions include transglutaminases and protease activators that increase the activity of the transglutaminases (col. 1, ll. 18-20; col. 6, ll. 17-23 and 52-53; and col. 7, ll. 4-6, 17-19, and 22-30; Answer 3 and 7);
- (2) Bernard teaches that the inventive compositions may be formulated as compositions for a shampoo, a hair setting lotion, a hair styling cream or gel, a dyeing composition or shampoo, restructuring lotions for the hair, a permanent waving composition, or an antidandruff composition (col. 8, ll. 15-24; Answer 3 and 7);
- (3) Bernard teaches that the inventive cosmetic composition may contain "additives and adjuvants common to the cosmetic arts" including colorants (col. 8, ll. 49-54; Answer 3 and 7); and

(4) McDevitt discloses the treatment of wool and other animal fibers with a proteolytic enzyme and a transglutaminase to improve the properties of the wool fibers, including dyeing characteristics, where calcium-dependent and calcium-independent transglutaminases are equivalently used (Abstract; col. 1, ll. 14-16; col. 2, ll. 7-12 and 23-27; col. 3, ll. 2-3; col. 4, ll. 40-61; col. 5, ll. 13-19; col. 7, ll. 25-29; Answer 4 and 7).

Under 35 U.S.C. § 103, the factual inquiry into obviousness requires a determination of: (1) the scope and content of the prior art; (2) the differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) secondary considerations. *See Graham v. John Deere of Kansas City*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). “[A]nalysis [of whether the subject matter of a claim is obvious] need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-41, 82 USPQ2d 1385, 1396 (2007), quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336-37 (Fed. Cir. 2006). The analysis supporting obviousness should be made explicit and should “identify a reason that would have prompted a person of ordinary skill in the art to combine the elements” in the manner claimed. *KSR*, 127 S. Ct. at 1741, 82 USPQ2d at 1389. However, an express suggestion to substitute one equivalent for another need not be present to render such substitution obvious. *See In re Fout*, 675 F.2d 297, 301, 213 USPQ 532, 536 (CCPA 1982).

Applying the preceding legal principles to the factual findings in the record of this appeal, we determine that the Examiner has established a prima facie case of obviousness, which prima facie case has not been adequately rebutted by Appellants' arguments. As shown by factual findings (1) and (3) listed above, we determine that Bernard discloses compositions with the same components as required by the claims on appeal, including colorants, an enzyme having transglutaminase activity, and at least one active substance having substrate activity for the enzyme. As shown by factual finding (2) listed above, we determine that Bernard would have suggested to one of ordinary skill in the art a process for coloring human hair (i.e., keratin) fibers by application of the above-mentioned composition to hair fibers. As shown by factual finding (4) listed above, we determine that McDevitt teaches the relative equivalence of calcium-dependent and calcium-independent transglutaminases in compositions similar to those of Bernard when employed in dyeing processes for keratin fibers (i.e., wool).² Accordingly, we determine that the use of either type of enzyme, as taught by McDevitt, as the enzyme in the composition and method of dyeing disclosed by Bernard, would have been obvious to the artisan. *See In re Fout, supra*. Furthermore, the Examiner has identified reasons that would have prompted one of ordinary skill in this art to combine the teachings of McDevitt with the disclosure of Bernard (Answer 5 and 7).

² Contrary to Appellants' argument (Br. 5-6), the claims on appeal are not limited to human hair but recite the treatment of keratin fibers (e.g., *see* claims 18 or 33 on appeal). As disclosed by Appellants (Specification 3:20-21), "[k]eratin fibers in the context of the invention are understood to include pelts, wool, feathers and in particular human hair."

For the foregoing reasons and those stated in the Answer, we affirm both grounds of rejection presented in this appeal. The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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